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EXAMINER

BROWN, RUEBEN M

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/759,935  
Filing Date: January 12, 2001  
Appellant(s): SCHILLER ET AL.

**MAILED**

AUG 28 2006

**Technology Center 2600**

\_\_\_\_\_  
Charles A. Mirho  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5/16/2006 appealing from the Office action mailed 12/16/05.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

Art Unit: 2623

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

4,002,843	RACKMAN	1-1977
5,790,170	SUZUKI	8-1998
6,0223,731	CHAWLA	2-2000

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rackman, (U.S. Pat # 4,002,843), in view of Suzuki, (U.S. Pat # 5,790,170).

Art Unit: 2623

Considering claim 10, the claimed VOD system, comprising 'a headend adapted to periodically generate a group identifier for broadcast to a group of subscribers associated with the group identifier' is met by the discussion in Rackman that subscriber addresses are broadcast on the 108-112 MHz channel, after which each particular subscriber is enabled to transmit any pending upstream message to the central control 10, see col. 6, lines 5-24. If the subscriber is attached to a subscriber interface unit, such as subscriber interface unit 40, which services multiple subscriber terminals, then the address of the message contains the 10-bit group ID, as well as the specific 4-bit terminal ID to which the message is addressed.

As for the additional claimed feature of 'the headend being further adapted to receive a request for VOD, data including the group identifier' and 'to enable one or more modulators associated with the group of subscribers to distribute the VOD data', Rackman does not discuss the details of a VOD system, and does not discuss assignment of any modulators to a group of subscribers. Nevertheless Suzuki, which is directed to a VOD system, teaches that transmission to subscribers may be sent through any one of the 15 input terminals of a node controller corresponding to the section addressee subscriber, see Abstract; col. 5, lines 49-64; col. 7, lines 44-49; col. 12, lines 49-67 thru col. 13, lines 1-6. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Rackman with features of Suzuki, at least for the advantages of more efficiently managing the transmission of VOD programming to subscribers, as taught by Suzuki col. 4, lines 1-34.

Art Unit: 2623

Considering claim 11, the claimed 'headend further adapted to receive as part of the request, subscriber terminal identifier distinct from the unique group identifier' is broad enough to read on the 4 bit terminal ID attached to the 10 bit subscriber interface identifier, this 4 bit terminal ID is used to distinguish the plurality of subscriber terminals attached to a particular subscriber terminal, see col. 8, lines 48-58 & col. 12, lines 64-68.

Considering claims 12-13, Rackman does not teach that the address information is transmitted as part of an MPEG program stream. Official Notice is taken that at the time the invention was made, MPEG streams were well known in the art, including for transmitting data to subscribers. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Rackman to transmit data over an MPEG stream, at least for the well-known benefit of the efficient two-way interactivity of MPEG protocols.

3. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki, in view of Rackman.

Considering claim 14, the claimed video on demand headend for distributing VOD to one or more groups of subscribers, comprising;

'a video server' reads on the video server 21 of Suzuki, (Fig. 4 & col. 6, lines 24-44).

‘an application server connected to the video server’ is broad enough to read on the HE controller 24, which controls the operations of the video server and other components of the headend, (Fig. 4 & col. 6, lines 24-67).

‘application server adapted to extract a subscriber group ID received in a request for VOD data from a subscriber’, Suzuki teaches that when a subscriber requests a video program, that the request includes a subscriber ID and ID of the requested program, (col. 13, lines 1-5), but not a group ID. However, Rackman teaches transmitting messages to subscribers, which enable them to transmit messages upstream to the headend. These messages includes the subscriber address, col. 6, lines 34-50. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Suzuki with the feature of transmitting a subscriber’s terminal address, along with request for service, for the benefit verification purposes identifying the subscriber, at least including the 10 bit subscriber interface unit to which the subscriber terminal is attached, as taught by Rackman (col. 6, lines 34-68; col. 7, lines 19-23 & col. 8, lines 50-53).

‘video server adapted cooperate with the application server, to identify one or more modulators servicing the group of subscribers to which the subscriber belongs’, reads on the disclosure in Suzuki that ATM exchanger 23 switches the requested digital data to any one of the terminals 104<sub>1</sub> to 104<sub>15</sub> that correspond with section addresses of the subscriber. These video signals are then transmitted to the appropriate modulator such as QAM modulator 105<sub>1</sub> to 105<sub>15</sub>,

Art Unit: 2623

(col. 7, lines 40-67 & Fig. 5). The claimed “video server” corresponds with the video server 21 of Suzuki.

The additionally the claimed feature of, ‘periodically communicate the subscriber group identifier to subscriber terminals associated with the group identifier’ is met by the discussion in Rackman, (col. 1, lines 49-67; col. 6, lines 33-51; col. 12, lines 65-68).

Considering claim 15, see Rackman, col. 6, lines 5-50.

Considering claims 16-17, the instant claims recite subject matter that was mentioned above in the rejection of claims 12-13, and is likewise analyzed.

4. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rackman & Suzuki, further in view of Chawla, (U.S. Pat # 6,023,731).

Considering claim 18, the claimed VOD delivery method, comprises subject matter that corresponds with subject matter mentioned above in the rejection of claim 10, and is likewise treated. Claim 18 additionally recites, ‘such that the subscriber group ID does not form a part of the unique subscriber address’. The additional limitation is still met by Rackman, since the group ID is a 10 bit code, and the subscriber terminal is separate 4 bit code. In other words, the 10 bits used to identify the group ID are distinct from the 4 bits used to identify the terminal address itself, col. 8, lines 47-58.



It is noted that the claim does not require that the group ID and terminal ID are transmitted separately.

As for the further claimed feature of, 'communicating a program number of the VOD data to the particular subscriber equipment, to enable the particular subscriber equipment to tune to the VOD data', Suzuki teaches the subscriber terminal tuning to the channel to receive the VOD data, but does not explicitly state that tuning is based on the a transmitted program number, Nevertheless, Chawla teaches that the headend may transmit the PID to the subscriber terminal which causes the subscriber terminal to tune to the appropriate channel to receive the requested data. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify the combination of Rackman & Suzuki, with teachings of Chawla, transmitting the program number to the subscriber, at least for the advantage of obviating the need for the subscriber to find the channel on which the program is transmitted.

Considering claim 19, the claimed subject matter is met by the combination of Rackman & Chawla.

5. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chawla, in view of Rackman.

Considering claim 20, the claimed subscriber terminal comprising;

‘a means for receiving a program stream including a group ID, and for tuning to the program stream and extracting the group ID’ is met by the combination of Chawla & Rackman. Chawla teaches transmission of subscriber selected programming to a particular subscriber using program stream technology, but does not teach that the information includes a group ID. Nevertheless, Rackman teaches a system wherein a single subscriber interface services multiple subscriber terminals, which requires that messages and data transmitted to the subscriber terminals include the address of the subscriber interface, which reads on the claimed group ID, see col. 3, lines 1-15; col. 6, lines 4-20. Thus, the claimed, “means for receiving”, is met by the combination of the media server in Chawla, (see col. 6, lines 39-55) and the central control 10 in Rackman, (see col. 7, lines 15-37). It is pointed out that even though the section of Rackman cited makes reference to a prior art system, Rackman teaches that these features are also included in the disclosed invention, see col. 8, lines 16-36.

It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Chawla with the feature of transmitting group ID, at least for the desirable benefit of verifying the address of a particular subscriber, as taught by Rackman.

As for, “means for including the group ID in a request for VOD”, again, Rackman teaches that when the subscriber terminal responds to the control center 10, the response includes

Art Unit: 2623

the address, which includes the group ID, see col. 6, lines 42-51. The claimed, “means for receiving the VOD data”, is met by the set-top box in Chawla, (Fig. 7; col. 6, lines 1-6; col. 6, lines 39-45).

Considering claim 21, the claimed, “means for receiving a program number for the VOD, and for tuning to a frequency associated with the program number”, is broad enough to read on the subscriber tuning to whatever channel is broadcasting the requested video programming. Also, Chawla teaches that the MPEG stream includes a plurality of programs, and the headend transmits the PID, which includes the channel on which the desired programming is located, which enabled the decoder to tune to the appropriate channel in order to retrieve the programming, see col. 8, lines 5-58. Chawla furthermore teaches that the headend may communicate the channel number to the decoder, in order to set the channel on which the video programming will be transmitted/received, see col. 6, lines 49-54.

**(10) Response to Argument**

First of all, it is noted that independent claims 10 recites, “a headend adapted to...” and “the headend further adapted to...”. Likewise, independent claim 14 recites, “the application server adapted to...”, and the “video server adapted to...”.

However, MPEP 2114 reads as such:

**APPARATUS CLAIMS MUST BE STRUCTURALLY DISTINGUISHABLE  
FROM THE PRIOR ART**

>While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >*In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board’s finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). “[A]pparatus claims cover what a device *is*, not what a device *does*.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

**MANNER OF OPERATING THE DEVICE DOES NOT DIFFERENTIATE**

A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (The preamble of claim 1 recited that the apparatus was “for mixing flowing developer material” and the body of the claim recited “means for mixing ..., said mixing means being stationary and completely submerged in the developer material”. The claim was rejected over a reference which taught all the structural limitations of the claim for the intended use of mixing flowing

developer. However, the mixer was only partially submerged in the developer material. The Board held that the amount of submersion is immaterial to the structure of the mixer and thus the claim was properly rejected.).

Examiner asserts that the “adapted to” language recited in claims 10 & 14, corresponds with the above discussion in MPEP 2114 and thus if prior art teaches all of the structural limitations of the claim(s), then the claim(s) are met by the instant prior art. In particular, claim 10, as well as its dependent claims 11-13, recite “a headend adapted to”. Therefore, since both Rackman (Fig. 1; col. 6, lines 4-25) and Suzuki, (Fig. 3; col. 5, lines 48-67), disclose a headend, the cited prior art reference meet the claimed subject matter. The central control 10 in Rackman, reads on a headend, whereas the cable station HE in Suzuki, reads on a headend.

As to the merits of appellant’s arguments and final rejection, the main argument as found on page 8, is that the 14 bit addresses disclosed in Rackman do not identify a group of subscribers, only an individual, particular subscriber. Examiner notes that the entire 14-bit

Art Unit: 2623

address, which is the format used when transmitted from the central control 10, does identify a particular subscriber. However, it is clearly disclosed by Rackman, that the 10 most significant bits of the address are used to identify the group, i.e. subscriber interface 40, (see Fig. 3; col. 7, lines 39-50). Rackman teaches that the subscriber interface 40 connects up to 16 terminals, all of which have the same 10 most significant bits in their 14 bit address, see col. 8, lines 47-54. The instant passages states, "It is assumed that the 16 subscribers which share the same interface unit have the same ten most significant bits in their address", which is the definition of a group identifier, as recited in the instant claims.

Appellant continues to argue on page 8, 'The individual addresses that are communicated in Rackman are not used anywhere to identify groups of subscribers'. Examiner respectfully disagrees, since each individual address contains the 10 bit group ID, it is this group ID which is processed by the 10 bit register shown in subscriber interface 40 of Fig. 3. Specifically the 10 bit register processes the 10 bit group ID portion of each address, in order to determine if the message is at least addressed to one of the group of 16 subscribers that share the same subscriber interface 40, see col. 8, lines 47-50 & col. 8, lines 8-36. The instant passages explains that in order to allow multiple subscribers to share the same interface unit, the shift register 52 only reads the 10 bit group ID and the comparator 54 compares the received address to the 10 bit group ID contained in the 10 bit address register 56, similar to the operation of a particular subscriber terminal, that would have 14 bit registers & comparator, instead of the 10 bit registers & comparator of the subscriber interface unit 40.

Art Unit: 2623

Appellant also argues that since the addressable messages include an attached address in Rackman, that these messages do not fall within the meaning of a broadcast, even though all of the subscriber interfaces see all of the messages, but only capture those message addressed to a subscriber serviced by the respective subscriber interface 40. However, examiner notes that appellant claim 10 recites, “periodically generate a group ID for broadcast to a group of subscribers associated with the group ID”. Therefore, appellant argument appears to be moot, since claim 10 utilizes a “broadcast” to transmit data to a “group”.

It appears that appellant’s claim 10 does not meet the meaning of a broadcast, as asserted on page 8. Appellant asserts, “the commonly understood meaning of broadcast is that the signal is not addressed to a particular subscriber, but in fact made available to anyone with compatible receiver”. Since the claim 10 broadcast [is directed] to a group of subscribers, it appears that the claim does not meet the asserted meaning. However, to the extent that all of the group of subscribers in claim 10 would presumably have compatible receivers, likewise all of the subscribers or subscriber interfaces in Rackman, would also have compatible receivers and would see all of the messages, however only the subscriber interface to whom the message(s) is addressed would actually retrieve the message.

Examiner also notes that claim 10 does not recite any limitations as whether the group ID is broadcast to all members of the group simultaneously or individually, or in some combination. Furthermore, it is noted that claim 10 does not actually recite that the group ID is broadcast at all.

Art Unit: 2623

The claim recites, “headend adapted to **periodically generate** a group ID for broadcast”, but does not actually state that the group ID *is* broadcast to the group of subscribers.

With respect to claim 11, on page 9, appellant argues, “In other words, Rackman teaches that terminals sharing the same interface unit share the same most significant 10 bits of the terminal address. However, the terminal address provided in Rackman is not distinct from the group identifier. The unique terminal address is formed from 4 least significant bits that ID the terminal from others having the same interface unit, and 10 bits that are the same for terminals having same interface unit. These bits are all provided together as the terminal address”, emphasis added. Notwithstanding this admission by appellant, it is subsequently argued in the next sentence, “For at least this reason, there is no teaching or suggestion in Rackman that the headend is adapted to receive, as part of a request for video in demand, a subscriber terminal identifier distinct from a unique group identifier”.

Again, examiner respectfully disagrees with appellant’s argument, since clearly it is the 4 bit unique terminal address, which identifies each particular terminal as recognized by appellant, that is distinct from the group ID, which is the 10 bit address. In other words each address has two parts, a 10 bit group ID, and a 4 bit unique terminal ID, which are distinct from each other, as recited in the claim.



Appellant also argues that claim 11 is distinct from Rackman, because the instant claim involves ‘the headend receiving a group ID from the subscriber address’, whereas Rackman discusses “receipt of the terminal address by the terminal equipment”. First of all, examiner points out that Rackman teaches (at least for verification purposes) that after a message is received by a subscriber terminal that recognized its 14 bit address, the instant subscriber terminal transmits its 14 bit address back to the control server, so that the central control 10 can verify that it has gained access with the proper terminal, see col. 7, lines 15, lines 35 & col. 8, lines 9-36.

Secondly, as pointed out in the rejection of claim 10, Rackman does not discuss subscriber requests in a VOD environment. However, as also pointed out in the rejection of claim 10, Suzuki does discuss subscriber requests in VOD system, and furthermore discloses that the subscriber’s request includes in the instant subscriber’s address, see col. 13, lines 1-10 & col. 15, lines 25-29. Thus, the combination of Rackman & Suzuki meets the claim.

As for the additionally claimed feature, “assign to the VOD data a program slot associated with one or more modulators to communicate to the subscriber terminal”, see Suzuki (col. 7, lines 40-54), which teaches that the going down data being transmitted to a subscriber is assigned to any one of the 15 input terminals of a node controller corresponding to the section of the instant subscriber. Suzuki furthermore teaches that, ‘if the request time information is A-class which requests real time transmission, then the transmission planner 4 looks for a free going-

Art Unit: 2623

down line transmission channel assigned to “for real time VOD”, which reads on the claimed subject matter.

Regarding appellant’s argument with respect to claim 18, “the subscriber group ID distinct from a unique subscriber terminal address, such that the subscriber group ID does not form a part of the unique subscriber equipment address”. Examiner points out that the 10 bit group ID is distinct from and does not form a part of the 4 bit unique terminal address.

With respect to claim 14, as pointed out in the discussion of claim 11, Suzuki teaches transmitting the subscriber terminal ID, along with its request for a VOD movie, col. 13, lines 1-10. Thus, the combination of Rackman (which teaches transmitting the 14 bit address to the central control 10, at least for verification) & Suzuki, reads on the claimed subject matter.

As for the additionally claimed application server to identify one or more modulators associated with the subscriber group, again Suzuki clearly teaches that the node controller is used which corresponds to the section of the addressee subscriber. Appellant asserts that neither of reference teaches an application server cooperating with a video server. Again, examiner respectfully disagrees and points out the video server 21 in Suzuki reads on the claimed “video server”, whereas the HE controller 24 reads on the claimed “application server”, see Fig. 4.

In particular, Suzuki teaches that the HE controller transmits the going down data DM, in response to an operator input to the HE controller 2 and a going-up control data UM (such as a

Art Unit: 2623

demand signal of the VOD) from a subscriber supplied through the ATM exchanger 23. The above passage (in combination with Rackman teaching a subscriber terminal returning a 14 bit address, comprising a 10 bit group ID, to the central control 10) meets the claimed, “application server adapted to extract a subscriber group ID received in a request for VOD data”.

With respect to claim 20, appellant argues on page 11 that, “no teaching of a terminal device tuning to a program stream and extracting a group ID and/or including a group ID in a request for VOD data, can be found in either Chawla or Rackman”. First of all, it is pointed out that Chawla, which is directed to transmission/reception of streaming video, clearly teaches tuning to a program stream and receiving VOD from the program stream, see col. 5, lines 21-62; col. 6, lines 1-9. Secondly, Chawla clearly teaches that a subscriber requests VOD to be received from the server, col. 3, lines 9-14; col. 6, lines 41-55. However, Chawla does not teach that the subscriber’s request includes a group ID. Nevertheless, as mentioned above, Rackman teaches transmitting a subscriber terminal address, comprising a 10-bit group ID, at least for verification purposes. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to operate Chawla such that any request for VOD data from a particular subscriber terminal, includes any relevant terminal identification, as taught by Rackman, including group identification.

Official Notice was taken in claim 13, that ‘at the time the invention was made, MPEG streams were well known in the art, including for transmitting data to subscribers’. Examiner cites the Alonso reference, to support the instant Official Notice. In particular, Alonso teaches a

Art Unit: 2623

VOD server 36 including a terminal ID, TID within an MPEG stream of data transmitted to a subscriber, col. 3, lines 20-46.

For the above reasons, it is believed that the rejections should be sustained.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,



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